

Claims

- [c1] WHAT IS CLAIMED IS:
1. The system for improving asymmetric projection comprising:
a light source producing a light beam to form a light path;
a projection lens which is disposed in the light path and projects an image onto a screen;
a light valve inserted in the light path between the light source and the projection lens, which selects and reflects the obliquely incident light beam to the projection lens or predetermined directions; and
at least one anamorphic surface unit placed in the light path between the light source and the light valve.
 - [c2] 2. The system for improving asymmetric projection of claim 1, further comprising a mirror disposed in the light path between the light valve and the anamorphic surface unit.
 - [c3] 3. The system for improving asymmetric projection of claim 1, wherein the light valve is a Liquid Crystal On Silicon (LCOS).
 - [c4] 4. The system for improving asymmetric projection of claim 1, wherein the light valve is a Digital Micro-mirror Device (DMD).
 - [c5] 5. The system for improving asymmetric projection of claim 1, wherein the light valve is a Liquid Crystal Display (LCD) panel.
 - [c6] 6. The system for improving asymmetric projection of claim 1, wherein the anamorphic surface unit is an anamorphic lens.
 - [c7] 7. The system for improving asymmetric projection of claim 1, wherein the anamorphic surface unit is a reflector.
 - [c8] 8. The system for improving asymmetric projection of claim 1, wherein the anamorphic surface unit can be any one surface of a reflector, converging lens, condenser lens, relay lens, and mirror.
 - [c9] 9. The method for improving asymmetric projection, comprising:

a light source for producing a light beam to form a light path;
a light valve for receiving the light beam with oblique incidence to generate a
light spot with two asymmetric diagonals thereon; and
at least one anamorphic surface unit, in the light path between the light source
and the light valve, having a curvature for offsetting two asymmetric diagonals
of the light spot into a more normal rectangle.

- [c10] 10. The method for improving asymmetric projection of claim 9, wherein the
anamorphic surface unit is an anamorphic lens.
- [c11] 11. The method for improving asymmetric projection of claim 9, wherein the
anamorphic surface unit is a reflecting surface.
- [c12] 12. The method for improving asymmetric projection of claim 9, wherein the
anamorphic surface unit has a curvature in predeterminate axis for elongating
the Y-axial length of the light spot in on-state, flat-state, and off-state in order
to form non-overlapping elliptic light beam.